

## **AMENDMENTS TO THE CLAIMS**

*This listing of claims will replace all prior versions and listings of claims in this application.*

### **LISTING OF CLAIMS:**

1. (Currently Amended) A magnetic resonance imaging apparatus comprising:

a magnetic structure having two opposite and spaced apart poles and a column or wall transverse to the poles and connecting the poles; the poles defining two opposite walls delimiting a patient-imaging space, the two opposite walls extending along substantially parallel planes which are substantially parallel to a vertical plane; the magnetic structure further comprising a magnetic structure supporting basement having two lateral walls to which the magnetic structure is rotatably connected at a rotation axis of the poles; the poles being provided at two opposite free ends of a U-shaped yoke, a central branch of the yoke being oriented horizontally and substantially parallel to the rotation axis, which central branch of the U-shaped yoke supports the table supporting frame in a slidable way along a longitudinal direction of the table; the two opposite free ends of the U-shaped yoke support the poles and are hinged around a common axis of rotation to the lateral walls of the supporting basement of the magnetic structure; and

a patient positioning table which is slidably connected to a table supporting frame between the two poles; the table supporting frame being supported by the magnetic structure;

the table being positioned with its longitudinal axis substantially parallel to the two opposite parallel walls of the poles and the table being oriented with its transverse axis substantially perpendicular to at least one of the two opposite walls; the table being slidable with respect to the magnetic structure in a direction parallel to a longitudinal axis of the table; manual or automatic means being provided for displacing the table relative to the magnetic structure along the longitudinal axis;

a lock for locking the table in a selected position relative to the magnetic structure;

manual or automatic means being provided for rotating the frame about the longitudinal axis; the frame with the table and the magnetic structure being rotatable together from a position in which the table is substantially horizontal to a position in which the table is substantially vertical, and vice versa;

wherein the entire magnetic structure is supported rotatably together with the table supporting frame around the same axis, wherein the axis of rotation of the table supporting frame and of at least the poles of the magnetic structure substantially coincides with a central axis of the poles;

wherein the table supporting frame is formed by an elongated element slidably engaged with a central branch of a U-shaped magnetic yoke; the table supporting frame has also an U shaped form with the central branch extending in a longitudinal direction of the table and with a plurality of angled end branches projecting from the central branch in a measure which is greater than a half width of the table while both transverse ends of the table are rotatably secured around a common axis of rotation at free ends of the angled end branches of the table supporting frame; and

wherein the table is secured to a second table supporting frame which is also U-shaped; the second supporting frame having an elongated central branch directly secured to a rear side of the table and which end branches project forward at both transverse ends of the table; the end branches of the second table supporting frame having a length which is shorter relative to a length of the end branches of the table supporting frame and being rotatably secured with their ends to free ends of the end branches of the table supporting frame.

2. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, in which the table supporting frame being further supported rotatably along a central horizontal axis perpendicular to at least one or both of the two opposite walls of the poles relative to the magnetic poles or to the said magnetic structure at least for a limited angular displacement.

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Original) The magnetic resonance imaging apparatus according to claim 1, wherein the table has a table plate and is further provided with at least one seat plate which is swingable from a position parallel to the table plate into a position perpendicular to the table plate and vice versa and in which swung position part of the table plate forms a back of a seat.

13. (Original) The magnetic resonance imaging apparatus according to claim 12, wherein the seat plate is formed by a part of the table plate the table plate being formed by at least to parts hinged together at least one of which forms the swingable seat plate.

14. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein a table plate and eventually the table supporting frame are formed at least by two parts which are hinged together along a transversal axis of the plate at least one or both of the two parts of the table and eventually of the table supporting frame being swingable in an angled position.

15. (Previously Presented) The magnetic resonance imaging apparatus according to claim 14, wherein the two parts of the table and eventually of the table supporting frame being swingable in an angled position which angular width is comprised between an angle of more than 180° between the two parts particularly of

more than 270° but slightly less than 360° and an angle of less than 90° but slightly more than 0° between the two parts, depending on the fact if a patient is laying on the table with its back or with its frontal side, i.e., in a prone or supine position.

16. (Original) The magnetic resonance imaging apparatus according to claim 15, wherein the two parts of the table and eventually of the table supporting frame being swingable in an angled position which angular width is of substantially 270° or 90° depending on the fact if the patient is laying on the table with its back or with its frontal side, i.e., in a prone or supine position, particularly a position in which the table has a vertical part and an horizontal part which works as a support for the patient in a bend forward position.

17. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein means are provided for rotating continuously or stepwise the table or the table supporting means or the poles or the magnetic structure.

18. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, further comprising: an angular locking means for locking the table or the table supporting frame or the poles or the magnetic structure in an angular position which is intermediate between a horizontal position and a vertical position or in an angular position which is beyond the horizontal position or over the vertical position.

19. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein it is provided with a footrest which is fastened to or integral with a table plate or the table supporting frame.

20. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein a footrest or a seat plate may be supported on the table or on the table supporting frame by means of a guide allowing the footrest or a seat to slide along the table or along the table supporting frame in both direction

parallel to the longitudinal axis of the table or of the table supporting frame.

21. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein a footrest and or a seat plate are pivotally supported on the table or on the table supporting frame around an axis which is transversal particularly perpendicular to the longitudinal axis of the table.

22. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof, wherein the patient retaining means include one or more removable fastening belts of the patient against the table and the patient fastening belts are adjustable relating to their length.

23. (Canceled)

24. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof and the patient retaining means include armpit supporting means, i.e., means for supporting the patient cooperating with armpits of the patient.

25. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof and the patient retaining means include knee retaining means against which the patient can push his knees or leg in order to exercise a force helping to maintain a position adherent to the table.

26. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic

structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof and the patient retaining means include arm rests, in the form of handles against which the patient can exercise with his arms a force helping to maintain a position adherent to the table.

27. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof and the patient retaining means are secured slidable along the table or the table supporting frame in a longitudinal direction thereof or in a transversal direction thereof.

28. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof and the table, or the table supporting frame or the poles or the magnetic structure or the machine frame are provided with several fastening points of the patient retaining means which fastening points are distributed over a predetermined range of different positions and at which the patient retaining means are secured by means of releasable securing means.

29. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof and the patient retaining means are secured to the table, or the table supporting frame or the poles or the magnetic structure or the machine frame in an angularly displaceable way, particularly around an axis which is transversal in particular perpendicular to the longitudinal axis of the table.

30. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against

the table in different positions thereof and a knee retaining means, arm rests and an armpit supporting means are adjustable relating to their distance from the table or from the table supporting frame.

31. (Canceled)

32. (Previously Presented) The magnetic resonance imaging apparatus according to claim 1, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof and the patient retaining means, a footrest, a seat, swingable parts of the table plate are provided with releasable locking means for releasable locking them in position.

33. (Previously Presented) A magnetic resonance imaging apparatus comprising a magnetic structure having two opposite and spaced apart poles and a column or wall transverse to the poles and connecting the poles; the poles defining two opposite walls delimiting a patient-imaging space, the two opposite walls extending along substantially parallel planes which are substantially parallel to a vertical plane; and a patient positioning table which is slidably connected to a table supporting frame between the two poles; the table being positioned with its longitudinal axis substantially parallel to the two opposite parallel walls of the poles and the table being oriented with its transverse axis substantially perpendicular to at least one of the two opposite walls; the table being slidable with respect to the magnetic structure in a direction parallel to a longitudinal axis of the table; manual or automatic means being provided for displacing the table relative to the magnet along the longitudinal axis; a lock for locking the table in a selected position relative to the magnet; wherein the table or the table supporting frame is secured to the column or wall transverse to the poles and connecting the poles, wherein the entire magnetic structure is supported rotatably together with the table supporting frame around the same axis, wherein the axis of rotation of the table supporting frame and of at least the poles of the magnetic structure substantially coincides with a central axis of the poles.

34. (Original) The magnetic resonance imaging apparatus according to claim 33, wherein the poles are oriented substantially vertical and the column connecting the poles is oriented substantially horizontal.

35. (Previously Presented) The magnetic structure according to claim 33, wherein the table has a table plate and is further provided with at least one seat plate which is swingable from a position parallel to the table plate into a position in which the seat plate is at an angle, particularly perpendicular to the table plate and vice versa.

36. (Previously Presented) The magnetic resonance imaging apparatus according to claim 35, wherein the seat plate is formed by a part of the table plate, the table plate being formed by at least two parts hinged together at least one of which forms the swingable seat plate.

37. (Previously Presented) The magnetic resonance imaging apparatus according to claim 33, wherein a table plate and eventually the table supporting frame are formed at least by two parts which are hinged together along a transversal axis of the table plate, at least one or both of the two parts of the table and eventually of the table supporting frame being swingable in an angled position.

38. (Previously Presented) The magnetic resonance imaging apparatus according to claim 37, wherein the two parts of the table and eventually of the table supporting frame being swingable in an angled position which angular width is comprised between an angle of more than  $180^{\circ}$  between the two parts particularly of more than  $270^{\circ}$  but slightly less than  $360^{\circ}$  and an angle of less than  $90^{\circ}$  but slightly more than  $0^{\circ}$  between the two parts, depending on the fact if a patient is laying on the table with its back or with its frontal side, i.e., in a prone or supine position.

39. (Original) The magnetic resonance imaging apparatus according to claim 38, wherein the two parts of the table and eventually of the table supporting frame being swingable in an angled position which angular width is of substantially



270° or 90° depending on the fact if the patient is laying on the table with its back or with its frontal side, i.e., in a prone or supine position, particularly a position in which the table has a vertical part and an horizontal part which works as a support for the patient in a bend forward position.

40. (Previously Presented) The magnetic resonance imaging apparatus according to claim 38, wherein the two parts of the table and eventually of the table supporting frame being swingable in an angled position one part with respect to the other and each part with respect to a substantially horizontal position.

41. (Original) The magnetic resonance imaging apparatus according to claim 33, wherein it is provided with a footrest which is fastened or integral with the table plate or the table supporting frame.

42. (Previously Presented) The magnetic resonance imaging apparatus according to claim 33, wherein a footrest and/or a seat plate may be supported on the table or on the table supporting frame by means of a guide allowing to the footrest or to a seat to slide along the table or along the table supporting frame in both direction parallel to the longitudinal axis of the table or of the table supporting frame.

43. (Previously Presented) A magnetic resonance imaging apparatus according to claim 33, wherein a footrest and/or a seat plate are pivotally supported on the table or on the table supporting frame around an axis which is transversal particularly perpendicular to the longitudinal axis of the table.

44. (Previously Presented) The magnetic resonance imaging apparatus according to claim 33, wherein the table or the table supporting frame or the magnetic structure or a machine frame are provided with means for retaining a patient against the table in different positions thereof.

45. (Original) The magnetic resonance imaging apparatus according to

claim 44, wherein the patient retaining means include one or more removable fastening belts of the patient against the table.

46. (Previously Presented) The magnetic resonance imaging apparatus according to claim 44, wherein the patient retaining means include armpit supporting means, i.e., means for supporting the patient cooperating with armpits of the patient.

47. (Previously Presented) The magnetic resonance imaging apparatus according to claim 44, wherein the patient retaining means include knee retaining means against which the patient can push his knees or leg in order to exercise a force helping to maintain a position adherent to the table.

48. (Previously Presented) The magnetic resonance imaging apparatus according to claim 44, wherein the patient retaining means include arm rests against which the patient can exercise with his arms a force helping to maintain a position adherent to the table.

49. (Previously Presented) The magnetic resonance imaging apparatus according to claim 44, wherein the patient retaining means are secured slidable along the table or the table supporting frame in a longitudinal direction thereof or in a transversal direction thereof.

50. (Previously Presented) The magnetic resonance imaging apparatus according to claim 44, wherein the table or the table supporting frame or the poles or the magnetic structure or a machine frame are provided with several fastening points of the patient retaining means which fastening points are distributed over a predetermined range of different positions and at which the patient retaining means are secured by means of releasable securing means.

51. (Previously Presented) The magnetic resonance imaging apparatus according to claim 44, wherein the patient retaining means are secured to the table, or the table supporting frame or the poles or the magnetic structure or a machine

frame in an angularly displaceable way, particularly around an axis which is transversal in particular perpendicular to the longitudinal axis of the table.

52. (Previously Presented) The magnetic resonance imaging apparatus according to claim 44, wherein knee retaining means, arm rests and armpit supporting means are adjustable relating to their distance from the table or from the table supporting frame.

53. (Previously Presented) The magnetic resonance imaging apparatus according to claim 44, wherein a plurality of patient securing belts are adjustable relating to their length.

54. (Previously Presented) The magnetic resonance imaging apparatus according to claim 33, wherein patient retaining means, a footrest, a seat, the swingable parts of the table plate are provided with releasable locking means for releasable locking them in position.

55. (Canceled)

56. (Canceled)

57. (Canceled)

58. (Canceled)

59. (Canceled)

60. (Canceled)

61. (Previously Presented) The method for magnetic resonance imaging with at least a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient secured to a table supporting frame in a slidable way in a substantially longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented at least substantially perpendicular to the poles, the table having a footrest at one end thereof, at least the poles of the magnetic structure and the table

supporting frame and the table being rotatable together around an axis which is substantially transverse to a longitudinal axis of the table and substantially parallel to the table; the method comprises:

rotating at least the poles and the supporting frame with the table to a patient positioning position in which the table is substantially horizontal, wherein the axis of rotation of the table supporting frame and of at least the poles of the magnetic structure substantially coincides with a central axis of the poles; sliding the table to an end position, in which a part of the table is outside the magnetic structure; arranging a patient on the table in a laying down supine or prone position; sliding the table or the table supporting frame along its longitudinal axis relative to the magnetic structure until the magnetic structure is correctly centered with a part of the patient's body to be examined; locking the table or the table supporting frame in the position at which the magnetic structure is centered with the part to be imaged; rotating at least the poles and the table supporting frame together with the table to a position in which the table is oriented in an intermediate angular position between a horizontal position and a vertical position or in which the table is oriented substantially vertical; locking at least the poles and the table or the table supporting frame with the table in the intermediate angular position or in a substantially vertical position; carrying out an imaging procedure; unlocking the poles or the table or the table supporting frame with the table relative to a rotation; rotating at least the poles or the table or the table supporting frame in a position in which the table is substantially horizontal; unlocking the table or the table supporting frame with the table relative to at least the magnetic poles; sliding the table to one position in which a part of the table is outside the magnetic structure and letting the patient step down from the table.

62. (Original) The method according to claim 61, in which a first imaging procedure is carried out when the table or the table supporting frame is in the horizontal position and the magnetic structure is correctly centered with a part of the patient's body to be examined and a second imaging procedure is carried out when at least the poles and the table or the table supporting frame together with the table are rotated and locked to a position in which the table is oriented in an intermediate angular position between the horizontal position and the vertical position or in which

the table is oriented substantially vertical; repeating at least one further time or several further times the imaging procedures in the horizontal and substantially vertical or intermediate angular position of the table by rotating every time at least the poles and the table or the table supporting frame together with the table from the horizontal to the substantially vertical or intermediate angular positions and vice versa before carrying out the imaging procedure.

63. (Previously Presented) The method according to claim 62, in which the at least one image taken in the horizontal position of the table and the at least one image taken in the substantially vertical or intermediate position of the table are compared one with another.

64. (Original) The method according to claim 61, wherein the patient is laying either in the prone position or in the supine position and comprising the steps of rotating at least the poles of the magnetic structure and the table or the table supporting frame with the table in an angular position over the vertical position, i.e., in an angular position in which the side on which the patient is laying is oriented with a component of the direction of orientation directed downwards, patient retaining means being provided for retaining the patient against the table surface in an anatomically compatible desired position.

65. (Original) The method according to claim 61, wherein one or more patient retaining means are provided, the patient retaining means are provided which can be secured at different positions relative to the table or with different orientations relative to the table, the method further comprising the step of securing the one or more patient retaining means at a certain position or with a certain orientation relative to the table and locking one or more patient retaining means at a certain position or with a certain orientation relative to the table before carrying out imaging and unlocking and taking away from a certain position or a certain orientation relative to the table one or more patient retaining means after having carried out imaging and before unlocking the table.

66. (Previously Presented) The method according to claim 65, wherein one or more patient retaining means are provided, the patient retaining means are provided which can be secured at different positions relative to the table or with different orientations relative to the table, the method further comprising the step of securing the one or more patient retaining means at a certain position or with a certain orientation relative to the table and locking the one or more patient retaining means at the certain position or with the certain orientation relative to the table before rotating at least the poles and the table supporting frame together with the table to from the substantially horizontal position to a position in which the table is oriented in an inclined position over the vertical position with the supporting surface of the table oriented with one component oriented downwards; and unlocking the patient retaining means in a selected position and deactivating the patient supporting or retaining means for putting the patient free after having rotated back at least the poles and the table supporting frame together with the table to from the substantially horizontal position to a position in which the table is oriented in an inclined position over the vertical position with the supporting surface of the table oriented with one component oriented downwards.

67. (Previously Presented) A method for magnetic resonance imaging with a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient secured to a table supporting frame which table or which table supporting frame with the table are slidable in a substantially longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented substantially perpendicular to at least one of the poles, the table having a footrest at one end thereof, at least the poles of the magnetic structure and the table or the table supporting frame and the table being rotatable together around an axis which is substantially transverse to a longitudinal axis of the table and substantially parallel to the table; the table or the table supporting frame with the table being rotatable around its longitudinal axis relative to the supporting frame and to the magnetic structure; wherein the method comprises: rotating at least the poles and the supporting frame with the table to a

patient positioning position in which the table is substantially horizontal; sliding the table to an end position, in which a part of the table is outside the magnetic structure; arranging the patient on the table in a laying down supine or prone position; sliding the table or the table supporting frame along its longitudinal axis relative to the magnetic structure until the magnetic structure is correctly centered with a part of the patient's body to be examined; locking the table or the table supporting frame in the position at which the magnetic structure is centered with the part to be imaged; rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is oriented in an intermediate angular position between the horizontal position and the vertical position or in which the table is oriented substantially vertical; locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position; rotating the table or the table supporting frame with the table around its longitudinal axis in a position in which the table is substantially parallel to the magnetic poles or at an angle to the magnetic poles; locking the table or the table supporting frame with the table in the above mentioned rotated position around an axis parallel or substantially parallel to the longitudinal axis; carrying out an imaging procedure; unlocking the table or the table supporting frame with the table from the above mentioned rotated position around an axis parallel or substantially parallel to the longitudinal axis; rotating back the table or the table supporting frame with the table around its longitudinal axis back in a position in which the table is substantially perpendicular to the poles; unlocking at least the poles and the table and/or the table supporting frame with the table from the intermediate angular position or from the substantially vertical position; rotating back at least the poles or the magnetic structure and the table or the table supporting frame with the table in a position in which the table is substantially horizontal; unlocking the table or the table supporting frame with the table relative to their sliding; sliding the table or the table supporting frame with the table to one position in which a part of the table is outside the magnetic structure and letting the patient step down from the table.

68. (Previously Presented) The method according to claim 67, in which

one or more patient retaining means are provided, the patient retaining means are provided which can be secured at different positions relative to the table or with different orientations relative to the table, the method further comprising the step of securing the one or more patient retaining means at a certain position or with a certain orientation relative to the table and locking the one or more patient retaining means at the certain position or with the certain orientation relative to the table before carrying out imaging and unlocking and taking away from the certain position or the certain orientation relative to the table the one or more patient retaining means after having carried out imaging and before unlocking the table.

69. (Original) The method according to claim 67, in which a table plate and eventually a table supporting frame are provided which are formed at least by two parts which are hinged together along a transversal axis of the plate at least one or both of the two parts of the table and eventually of the table supporting frame being swingable in an angled position relative one to the other or relative to a main orientation of the table, the method further comprising the steps of angularly displacing one or both the two parts of the table plate or of the table supporting frame and locking the parts in the angular position before carrying out imaging and of unlocking the two parts and swing back one or both the two parts in the main orientation of the table after having carried out the imaging.

70. (Original) A method according to claim 69, wherein one or more patient retaining means are secured to the table before swinging at least one of the parts forming the table plate or the table supporting frame.

71. (Original) The method according to claim 67, wherein the table or the table supporting frame with the table are supported rotatable around a substantially longitudinal axis, the method comprising the further step of rotating the table around longitudinal axis and locking the table in the rotated position after having activated one or more patient retaining means and before carrying out imaging and of unlocking the table from rotated position and rotate back the table in the substantially horizontal position after having carried out imaging and before taking away the



patient retaining means.

72. (Original) The method according to claim 67, wherein the patient retaining means includes alternatively or in combination at least a footrest or a seat or at least a securing belt or a knee retaining means or an armpit supporting means or an arm rest.

73. (Previously Presented) A method for magnetic resonance imaging with a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient secured to a table supporting frame which table or which table supporting frame with the table are slidable in a longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented at least substantially perpendicular to at least one of the poles; the table having a footrest at one end thereof; at least the poles of the magnetic structure and the table or the table supporting frame with the table being rotatable together around an axis which is transverse to a longitudinal axis of the table and substantially parallel to the table; the table being further rotatable around its longitudinal axis relative to the supporting frame and to the magnet; the table being formed by a first and a second part which are hinged together in such a way that at least one or both of the two parts of the table can be displaced angularly in a position at an angle or substantially perpendicular with respect to the other part of the table along a substantially transverse axis of the table or of the table supporting frame, locking means being provided for locking at least one or both of the first and second part of the table in the angled position relative to the other part of the table; further comprising patient retaining means which can be activated and deactivated and which are displaceable either by sliding and or by an angular motion with respect to the table or to the table supporting frame; the method comprises:

rotating at least the poles and the table or the table supporting frame with the table to a patient positioning position in which the table is substantially horizontal; sliding the table to an end position, in which a part of the table is outside the

magnetic structure; arranging the patient on the table in a laying supine or prone position; positioning the patient retaining means according to a selected posture desired for the patient during examination; activating and locking the patient retaining means; sliding the table along its longitudinal axis relative to the magnetic structure until the magnetic structure is correctly centered with a part of the patient's body to be examined; locking the table in the position relative to a sliding; rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is in an intermediate position between the substantially horizontal and the substantially vertical position or in which the table is substantially vertical; locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position; depending on whether the patient was laid supine or prone on the table, swinging backward or rearward at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are at an angle one with respect to the other; locking the two parts of the table in the angled relative position; rotating the table or the table supporting frame with the table around their substantially longitudinal axis in an angled position relative to the poles or in a position in which the table is substantially parallel to the poles and locking the table in the position; carrying out an imaging procedure; unlocking the table or the table supporting frame with the table relative to their rotation around their substantially longitudinal axis and rotating back the table or the table supporting frame with the table around their substantially longitudinal axis in a position in which the table is substantially perpendicular to the poles; unlocking the two parts of the table in the angled relative position, swinging back at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are again aligned one with respect to the other; unlocking at least the poles and the table or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position; rotating at least the table and the supporting frame in a position in which the table is substantially horizontal; unlocking the table in the position relative to a sliding; and sliding the table to one position in which a part of the table is outside

the magnetic structure and letting the patient step down from the table.

74. (Previously Presented) A method for magnetic resonance imaging with a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient secured to a table supporting frame which table or which table supporting frame with the table are slidable in a longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented at least substantially perpendicular to at least one of the poles; the table having a footrest at one end thereof; at least the poles of the magnetic structure and the and the table or the table supporting frame with the table being rotatable together around an axis which is transverse to a longitudinal axis of the table and substantially parallel to the table; the table being formed by a first and a second part which are hinged together in such a way that at least one or both of the two parts of the table can be displaced angularly in a position at an angle or substantially perpendicular with respect to the other part of the table along a substantially transverse axis of the table or of the table supporting frame, locking means being provided for locking at least one or both of the first and second part of the table in the angled position relative to the other part of the table; further comprising patient retaining means which can be activated and deactivated and which are displaceable either by sliding and or by an angular motion with respect to the table or to the table supporting frame; the method comprises: rotating at least the poles and the table or the table supporting frame with the table to a patient positioning position in which the table is substantially horizontal; sliding the table to an end position, in which a part of the table is outside the magnetic structure; arranging the patient on the table in a laying supine or prone position; positioning the patient retaining means according to a selected posture desired for the patient during examination; activating and locking the patient retaining means; sliding the table along its longitudinal axis relative to the magnetic structure until the magnetic structure is correctly centered with a part of the patient's body to be examined; locking the table in the position relative to a sliding; rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is

in an intermediate position between the substantially horizontal and the substantially vertical position or in which the table is substantially vertical; locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position; depending on whether the patient was laid supine or prone on the table, swinging backward or rearward at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are at an angle one with respect to the other; locking the two parts of the table in the angled relative position; carrying out an imaging procedure; unlocking the two parts of the table in the angled relative position, swinging back at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are again aligned one with respect to the other; unlocking at least the poles and the table or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position; rotating at least the table and the supporting frame in a position in which the table is substantially horizontal; unlocking the table in the position relative to a sliding; sliding the table to one position in which a part of the table is outside the magnetic structure and letting the patient step down from the table.

75. (Previously Presented) The method for carrying out magnetic resonance imaging with a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient mounted on a supporting frame in a slidable way in a substantially longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented substantially perpendicular to the poles; at least the poles of the magnetic structure and the table or the table supporting frame and the table being rotatable together around an axis which is transverse to the longitudinal axis of the table and substantially parallel to the table; wherein the method comprises:

rotating at least the poles and the supporting frame together with the table to a position in which the table is not horizontal, wherein the axis of rotation of the table

supporting frame and of at least the poles of the magnetic structure substantially coincides with a central axis of the poles; providing a seat plate secured at an angle, particularly substantially perpendicular, to the table; sitting the patient down on the seat plate; carrying out the imaging procedure; and letting the patient step out of the magnetic structure.

76. (Previously Presented) The method according to claim 75, wherein the further step is provided of regulating the angular position of the table and/or of the table supporting frame with the table or of the seat.

77. (Previously Presented) The method for carrying out magnetic resonance imaging according to claims 75, wherein the table or the table supporting frame together with the table are rotatable around an axis which is substantially parallel to or coincident with their longitudinal axis relative to the supporting frame and to the magnetic structure, wherein the method comprises:

rotating at least the poles and the supporting frame together with the table in a position in which the table is not horizontal;

locking the table in this position; providing a seat plate secured at an angle to the table or to the table supporting frame;

sitting the patient down on the seat plate;

rotating the table and/or the table supporting frame with the table around the axis being substantially parallel or coincident with its longitudinal axis in a position in which the table is parallel to the magnetic poles or at an angle to the magnetic poles;

locking the table in the position;

carrying out the imaging procedure;

unlocking the table relative to the rotation around the axis being substantially parallel or coincident with its longitudinal axis and rotating back the table or the table

supporting frame with the table in a position in which the table is substantially perpendicular to the magnetic poles; and

letting the patient step out of the magnetic structure.

78. (Previously Presented) A method for carrying out magnetic resonance imaging with a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient mounted on a supporting frame in a slidable way in a substantially longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented substantially perpendicular to the poles; at least the poles of the magnetic structure and the table or the table supporting frame and the table being rotatable together around an axis which is transverse to the longitudinal axis of the table and substantially parallel to the table; one or more patient retaining means being provided which can be secured to the table or to the table supporting frame or to the poles or to the magnetic structure or to the machine frame in different positions relative to the table or with different orientations relating to the table; wherein the method comprises:

a) rotating at least the poles and the table or the table supporting frame together with the table in a position in which the table is substantially horizontal, wherein the axis of rotation of the table supporting frame and of at least the poles of the magnetic structure substantially coincides with a central axis of the poles;

b) providing a seat plate secured at an angle, particularly substantially perpendicular, to the table;

c) providing one or more patient retaining means in a certain positions and with certain orientation relative to the table for a certain posture of the patient;

d) carrying out the imaging procedure;

e) rotating and locking at least the poles and the table or the table supporting frame together with the table in a position in which the table is not horizontal;

f) carrying out the imaging procedure;

g) eventually repeating steps a) to f) several times;

h) taking away or deactivating the one or more patient retaining means or the patient seat;

i) letting the patient step out of the magnetic structure;

j) comparing images acquired in the one or more steps d) and f) and highlighting the differences between the images.

79. (Previously Presented) The method according to claim 78, in which images are compared by a software tool.

80. (Original) The method according to claim 78, wherein the table or the table supporting frame together with the table are rotatable around a axis which is substantially parallel to or coincident with their longitudinal axis relative to the supporting frame and to the magnetic structure; the method comprises the following further steps of: rotating the table or the table supporting frame with the table around the axis being substantially parallel or coincident with its longitudinal axis in a position in which the table is parallel to the magnetic poles or at an angle to the magnetic poles; locking the table in the position after having carried out step a) or step b) or step c) or after having carried out step e): unlocking the table relative to the rotation around the axis being substantially parallel or coincident with its longitudinal axis and rotating back the table or the table supporting frame with the table in a position in which the table is substantially perpendicular to the magnetic poles after having carried out step a) or step b) or step c) or after having carried out step e).

81. (Original) The method according to claim 78, wherein a table plate and

eventually a table supporting frame are provided which are formed at least by two parts which are hinged together along a transversal axis of the plate at least one or both of the two parts of the table and eventually of the table supporting frame being swingable in an angled position relative one to the other or relative to a main orientation of the table, the method further comprising the steps of angularly displacing one or both the two parts of the table plate or of the table supporting frame and locking the parts in the angular position before carrying out imaging according to steps g) or f) and of unlocking the two parts and swing back one or both the two parts in the main orientation of the table after having carried out the imaging according to steps g) or f).

82. (Original) The method according to claim 78, wherein the patient retaining means include at least a footrest, or at least an armrest or at least a knee retaining means or at least an armpit supporting means.

83. (Canceled)

84. (Canceled)

85. (Canceled)

86. (Canceled)

87. (Canceled)

88. (Canceled)

89. (Previously Presented) A method for carrying out an intervention in combination with magnetic resonance imaging providing an apparatus with at least a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient secured to a table supporting frame in a slidable way in a substantially longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented at least substantially perpendicular to the poles, the table having a footrest at one end thereof, at least the poles of the magnetic structure and the table supporting frame and the table being rotatable together around an axis which is substantially



transverse to a longitudinal axis of the table and substantially parallel to the table;  
the method comprises:

rotating at least the poles and the supporting frame with the table to a patient positioning position in which the table is substantially horizontal;

sliding the table to an end position, in which a part of the table is outside the magnetic structure;

arranging the patient on the table in a laying down supine or prone position;  
sliding the table or the table supporting frame along its longitudinal axis relative to the magnetic structure until the magnetic structure is correctly centered with a part of the patient's body to be examined;

locking the table or the table supporting frame in the position at which the magnetic structure is centered with the part to be imaged;

rotating at least the poles and the table supporting frame together with the table to a position in which the table is oriented in an intermediate angular position between the horizontal position and the vertical position or in which the table is oriented substantially vertical;

locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

carrying out an imaging procedure;

unlocking the magnetic poles or the table or the table supporting frame with the table relative to a rotation; rotating and locking at least the poles or the table and/or the table supporting frame in a position in which the table is substantially horizontal;

carrying out a first intervention step or the complete intervention;

carrying out one or more time the following steps until intervention is completed;

unlocking and rotating back at least the poles or the table and/or the table supporting frame in a position in which the table is oriented in an intermediate angular position between the horizontal position and the vertical position or in which the table is oriented substantially vertical;

carrying out an imaging procedure;

unlocking and rotating at least the magnetic poles or the table or the table supporting frame with the table relative to a rotation in a position in which the table is substantially horizontal;

carrying out a further intervention step or completing the intervention;

after having completed the intervention unlocking the table or the table supporting frame with the table relative to at least the magnetic poles; sliding the table to one position in which a part of the table is outside the magnetic structure and letting the patient step down from the table.

90. (Original) The method according to claim 89, wherein the further steps are provided of unlocking, sliding and locking the table and or the table supporting frame with the table relative to at least the magnetic poles in a position in which the anatomic region where the intervention has to be carried out is centered within the imaging volume between the poles of the magnetic structure each time an imaging procedure has to be carried out and in a position in which the anatomic region where the intervention has to be carried out is outside the volume defined by the magnetic poles each time an intervention step has to be carried out.

91. (Original) The method according to claim 90, wherein the patient is laying either in the prone position or in the supine position and comprising the steps of rotating at least the poles of the magnetic structure and the table or the table supporting frame with the table in an angular position over the vertical position, i.e. in an angular position in which the side on which the patient is laying is oriented with a component of the direction of orientation directed downwards, patient retaining means being provided for retaining the patient against the table surface in an

anatomically compatible desired position when imaging has to be carried out.

92. (Previously Presented) The method according to claim 89, wherein one or more patient retaining means are provided, the patient retaining means being able to be secured at different positions relative to the table or with different orientations relative to the table, the method further comprising the step of securing the one or more patient retaining means at a certain position or with a certain orientation relative to the table and locking the one or more patient retaining means at the certain position or with the certain orientation relative to the table before carrying out imaging and unlocking and taking away from the certain position or the certain orientation relative to the table the one or more patient retaining means after having carried out imaging and before unlocking the table.

93. (Original) The method according to claim 92, wherein one or more patient retaining means are provided, the patient retaining means are provided which can be secured at different positions relative to the table or with different orientations relative to the table, the method further comprising the step of securing the one or more patient retaining means at a certain position or with a certain orientation relative to the table and locking one or more patient retaining means at the certain position or with a certain orientation relative to the table before rotating at least the poles and the table supporting frame together with the table to from the substantially horizontal position to a position in which the table is oriented in an inclined position over the vertical position with the supporting surface of the table oriented with one component oriented downwards; and unlocking the patient retaining means in the selected position and deactivating the patient supporting or retaining means for putting the patient free after having rotated back at least the poles and the table supporting frame together with the table to the substantially horizontal position.

94. (Previously Presented) A method for carrying out an intervention in combination with magnetic resonance imaging providing an apparatus with having a magnetic structure with two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging

space; and a table for a patient secured to a table supporting frame which table or which table supporting frame with the table are slidable in a substantially longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented substantially perpendicular to at least one of the poles, the table having a footrest at one end thereof, at least the poles of the magnetic structure and the table or the table supporting frame and the table being rotatable together around an axis which is substantially transverse to a longitudinal axis of the table and substantially parallel to the table; the table or the table supporting frame with the table being rotatable around its longitudinal axis relative to the supporting frame and to the magnetic structure; wherein the method comprises:

rotating at least the poles and the supporting frame with the table to a patient positioning position in which the table is substantially horizontal;

sliding the table to an end position, in which a part of the table is outside the magnetic structure; arranging the patient on the table in a laying down supine or prone position;

sliding the table or the table supporting frame along its longitudinal axis relative to the magnetic structure until the magnetic structure is correctly centered with a part of the patient's body to be examined;

locking the table or the table supporting frame in the position at which the magnetic structure is centered with the part to be imaged;

rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is oriented in an intermediate angular position between the horizontal position and the vertical position or in which the table is oriented substantially vertical;

locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

rotating the table or the table supporting frame with the table around its longitudinal axis in a position in which the table is substantially parallel to the magnetic poles or at an angle to the magnetic poles;

locking the table or the table supporting frame with the table in the above mentioned rotated position around an axis parallel or substantially parallel to the longitudinal axis;

carrying out an imaging procedure;

unlocking the table or the table supporting frame with the table from the above mentioned rotated position around an axis parallel or substantially parallel to the longitudinal axis;

rotating back the table or the table supporting frame with the table around its longitudinal axis back in a position in which the table is substantially perpendicular to the poles; unlocking at least the poles and the table or the table supporting frame with the table from the intermediate angular position or from the substantially vertical position;

rotating back and locking at least the poles or the magnetic structure and the table or the table supporting frame with the table in a position in which the table is substantially horizontal;

carrying out an intervention step or a complete intervention; the method further comprising the following steps for carrying out further intervention steps or completing the intervention: unlocking and rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is oriented in an intermediate angular position between the horizontal position and the vertical position or in which the table is oriented substantially vertical;

locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

rotating the table or the table supporting frame with the table around its longitudinal axis in a position in which the table is substantially parallel to the

magnetic poles or at an angle to the magnetic poles; locking the table or the table supporting frame with the table in the above mentioned rotated position around an axis parallel or substantially parallel to the longitudinal axis;

carrying out an imaging procedure;

unlocking the table or the table supporting frame with the table from the above mentioned rotated position around an axis parallel or substantially parallel to the longitudinal axis;

rotating back the table or the table supporting frame with the table around its longitudinal axis back in a position in which the table is substantially perpendicular to the poles;

unlocking at least the poles and the table or the table supporting frame with the table from the intermediate angular position or from the substantially vertical position;

rotating back and locking at least the poles or the magnetic structure and the table or the table supporting frame with the table in a position in which the table is substantially horizontal;

carrying out a further intervention step or completing the intervention;

after having completed the intervention unlocking the table or the table supporting frame with the table relative to their sliding;

sliding the table or the table supporting frame with the table to one position in which a part of the table is outside the magnetic structure and letting the patient step down from the table.

95. (Original) The method according to claim 94, wherein the further steps are provided of unlocking, sliding and locking the table and or the table supporting frame with the table relative to at least the magnetic poles in a position in which the anatomic region where the intervention has to be carried out is centered within the imaging volume between the poles of the magnetic structure each time an imaging

procedure has to be carried out and in a position in which the anatomic region where the intervention has to be carried out is outside the volume defined by the magnetic poles each time an intervention step has to be carried out.

96. (Original) The method according to claim 94, in which one or more patient retaining means are provided, the patient retaining means are provided which can be secured at different positions relative to the table or with different orientations relative to the table, the method further comprising the step of securing the one or more patient retaining means at a certain position or with a certain orientation relative to the table and locking one or more patient retaining means at a certain position or with a certain orientation relative to the table before carrying out imaging and unlocking and taking away from a certain position or a certain orientation relative to the table one or more patient retaining means after having carried out imaging and before unlocking the table.

97. (Original) The method according to claim 94, in which a table plate and eventually a table supporting frame are provided which are formed at least by two parts which are hinged together along a transversal axis of the plate at least one or both of the two parts of the table and eventually of the table supporting frame being swingable in an angled position relative one to the other or relative to a main orientation of the table, the method further comprising the steps of angularly displacing one or both the two parts of the table plate or of the table supporting frame and locking the parts in the angular position before carrying out imaging and of unlocking the two parts and swing back one or both the two parts in the main orientation of the table after having carried out the imaging.

98. (Original) The method according to claim 97, wherein one or more patient retaining means are secured to the table before swinging at least one of the parts forming the table plate or the table supporting frame.

99. (Original) The method according to claim 94, wherein the table or the table supporting frame with the table are supported rotatable around a substantially

longitudinal axis, the method comprising the further step of rotating the table around longitudinal axis and locking the table in the rotated position after having activated one or more patient retaining means and before carrying out imaging and of unlocking the table from rotated position and rotate back the table in the substantially horizontal position after having carried out imaging and before carrying out an intervention step.

100. (Original) The method according to claim 94, wherein the patient retaining means includes alternatively or in combination at least a footrest or a seat or at least a securing belt or a knee retaining means or an armpit supporting means or an arm rest.

101. (Previously Presented) A method for carrying out an intervention in combination with magnetic resonance imaging providing an apparatus with at least a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient secured to a table supporting frame which table or which table supporting frame with the table are slidable in a longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented at least substantially perpendicular to at least one of the poles; the table having a footrest at one end thereof; at least the poles of the magnetic structure and the table or the table supporting frame with the table being rotatable together around an axis which is transverse to a longitudinal axis of the table and substantially parallel to the table; the table being further rotatable around its longitudinal axis relative to the supporting frame and to the magnet; the table being formed by a first and a second part which are hinged together in such a way that at least one or both of the two parts of the table can be displaced angularly in a position at an angle or substantially perpendicular with respect to the other part of the table along a substantially transverse axis of the table or of the table supporting frame, locking means being provided for locking at least one or both of the first and second part of the table in the angled position relative to the other part of the table; further comprising patient retaining means which can be



activated and deactivated and which are displaceable either by sliding and or by an angular motion with respect to the table or to the table supporting frame; the method comprises:

rotating at least the poles and the table or the table supporting frame with the table to a patient positioning position in which the table is substantially horizontal;

sliding the table to an end position, in which a part of the table is outside the magnetic structure;

arranging the patient on the table in a laying supine or prone position;  
positioning the patient retaining means according to a selected posture desired for the patient during examination;

activating and locking the patient retaining means; sliding the table along its longitudinal axis relative to the magnetic structure until the magnetic structure is correctly centered with a part of the patient's body to be examined; locking the table in the position relative to a sliding;

rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is in an intermediate position between the substantially horizontal and the substantially vertical position or in which the table is substantially vertical;

locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position; depending on whether the patient was laid supine or prone on the table,

swinging backward or rearward at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are at an angle one with respect to the other;

locking the two parts of the table in the angled relative position; rotating the table or the table supporting frame with the table around their substantially

longitudinal axis in an angled position relative to the poles or in a position in which the table is substantially parallel to the poles and locking the table in the position;

carrying out an imaging procedure;

unlocking the table or the table supporting frame with the table relative to their rotation around their substantially longitudinal axis and rotating back the table or the table supporting frame with the table around their substantially longitudinal axis in a position in which the table is substantially perpendicular to the poles;

unlocking the two parts of the table in the angled relative position;

swinging back at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are again aligned one with respect to the other in a substantially horizontal plane;

unlocking at least the poles and the table or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

rotating and locking at least the poles and the table or the supporting frame in a position in which the table is substantially horizontal;

carrying out a first intervention step or a complete intervention;

the method comprises the further steps which are repeatedly executed for carrying out or completing the intervention:

unlocking and rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is in an intermediate position between the substantially horizontal and the substantially vertical position or in which the table is substantially vertical;

locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

depending on whether the patient was laid supine or prone on the table, swinging backward or rearward at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are at an angle one with respect to the other;

locking the two parts of the table in the angled relative position; rotating the table or the table supporting frame with the table around their substantially longitudinal axis in an angled position relative to the poles or in a position in which the table is substantially parallel to the poles and locking the table in the position; carrying out an imaging procedure;

unlocking the table or the table supporting frame with the table relative to their rotation around their substantially longitudinal axis and rotating back the table or the table supporting frame with the table around their substantially longitudinal axis in a position in which the table is substantially perpendicular to the poles; unlocking the two parts of the table in the angled relative position;

swinging back at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are again aligned one with respect to the other in an substantially horizontal plane;

unlocking at least the poles and the table or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position; rotating at least the table and the supporting frame in a position in which the table is substantially horizontal;

carrying out a further intervention step or completing intervention or; unlocking the table in the position relative to a sliding;

sliding the table to one position in which a part of the table is outside the magnetic structure and letting the patient step down from the table.

102. (Original) The method according to claim 94, wherein the further steps

are provided of unlocking, sliding and locking the table and or the table supporting frame with the table relative to at least the magnetic poles in a position in which the anatomic region where the intervention has to be carried out is centered within the imaging volume between the poles of the magnetic structure each time an imaging procedure has to be carried out and in a position in which the anatomic region where the intervention has to be carried out is outside the volume defined by the magnetic poles each time an intervention step has to be carried out.

103. (Previously Presented) A method for carrying out an intervention in combination with magnetic resonance imaging providing an apparatus with at least a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient secured to a table supporting frame which table or which table supporting frame with the table are slidable in a longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented at least substantially perpendicular to at least one of the poles; the table having a footrest at one end thereof; at least the poles of the magnetic structure and the table or the table supporting frame with the table being rotatable together around an axis which is transverse to a longitudinal axis of the table and substantially parallel to the table; the table being formed by a first and a second part which are hinged together in such a way that at least one or both of the two parts of the table can be displaced angularly in a position at an angle or substantially perpendicular with respect to the other part of the table along a substantially transverse axis of the table or of the table supporting frame, locking means being provided for locking at least one or both of the first and second part of the table in the angled position relative to the other part of the table; further comprising patient retaining means which can be activated and deactivated and which are displaceable either by sliding and or by an angular motion with respect to the table or to the table supporting frame;

the method comprises:

rotating at least the poles and the table or the table supporting frame with the table to a patient positioning position in which the table is substantially horizontal;

sliding the table to an end position, in which a part of the table is outside the magnetic structure;

arranging the patient on the table in a laying supine or prone position;

positioning the patient retaining means according to a selected posture desired for the patient during examination;

activating and locking the patient retaining means;

sliding the table along its longitudinal axis relative to the magnetic structure until the magnetic structure is correctly centered with a part of the patient's body to be examined;

locking the table in the position relative to a sliding;

rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is in an intermediate position between the substantially horizontal and the substantially vertical position or in which the table is substantially vertical;

locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

depending on whether the patient was laid supine or prone on the table, swinging backward or rearward at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are at an angle one with respect to the other;

locking the two parts of the table in the angled relative position;

carrying out an imaging procedure;

unlocking the two parts of the table in the angled relative position;

swinging back at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are; again aligned one with respect to the other;

unlocking at least the poles and the table or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

rotating at least the table and the supporting frame in a position in which the table is substantially horizontal;

carrying out an intervention step or a complete intervention;

the method comprises further steps being repeated for some or each further intervention step until completion of the intervention:

rotating at least the poles and the table or the supporting frame together with the table to a position in which the table is in an intermediate position between the substantially horizontal and the substantially vertical position or in which the table is substantially vertical;

locking at least the poles and the table and/or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

depending on whether the patient was laid supine or prone on the table, swinging backward or rearward at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are at an angle one with respect to the other;

locking the two parts of the table in the angled relative position;

carrying out an imaging procedure;

unlocking the two parts of the table in the angled relative position.

swinging back at least the first part or at least the second part or both the first and second part of the table which form the upper or lower part of table in a position in which the first and second parts of the table are again aligned one with respect to the other;

unlocking at least the poles and the table or the table supporting frame with the table in the intermediate angular position or in the substantially vertical position;

rotating at least the table and the supporting frame in a position in which the table is substantially horizontal;

carrying out a further intervention step or completing the intervention or;

unlocking the table in the position relative to a sliding;

sliding the table to one position in which a part of the table is outside the magnetic structure and letting the patient step down from the table.

104. (Original) A method according to claim 103, wherein the further steps are provided of unlocking, sliding and locking the table and or the table supporting frame with the table relative to at least the magnetic poles in a position in which the anatomic region where the intervention has to be carried out is centered within the imaging volume between the poles of the magnetic structure each time an imaging procedure has to be carried out and in a position in which the anatomic region where the intervention has to be carried out is outside the volume defined by the magnetic poles each time an intervention step has to be carried out.

105. (Original) A method for carrying out an intervention in combination with magnetic resonance imaging providing an apparatus with at least a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient mounted on a supporting frame in a slidable way in a substantially longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented substantially

perpendicular to the poles; at least the poles of the magnetic structure and the table or the table supporting frame and the table being rotatable together around an axis which is transverse to the longitudinal axis of the table and substantially parallel to the table; wherein the method comprises: rotating at least the poles and the supporting frame together with the table in a position in which the table is not horizontal; providing a seat plate secured at an angle, particularly substantially perpendicular, to the table; sitting the patient down on the seat plate; carrying out the imaging procedure; and rotating back and locking at least the poles and the supporting frame together with the table in a position in which the table is substantially horizontal; taking away the seat plate and letting the patient taking the relaxed and stretched position; carrying out an intervention step or a complete intervention; the method comprises further steps being repeated for some or each further intervention step until completion of the intervention: unlocking and rotating at least the poles and the supporting frame together with the table in a position in which the table is not horizontal; providing a seat plate secured at an angle, particularly substantially perpendicular, to the table; sitting the patient down on the seat plate; carrying out the imaging procedure; and rotating back and locking at least the poles and the supporting frame together with the table in a position in which the table is substantially horizontal; taking away the seat plate and letting the patient taking the relaxed stretched position; carrying out a further intervention step or completing the intervention or; letting the patient step out of the magnetic structure.

106. (Original) The method according to claim 105, wherein the further steps are provided of unlocking, sliding and locking the table and or the table supporting frame with the table relative to at least the magnetic poles in a position in which the anatomic region where the intervention has to be carried out is centered within the imaging volume between the poles of the magnetic structure each time an imaging procedure has to be carried out and in a position in which the anatomic region where the intervention has to be carried out is outside the volume defined by the magnetic poles each time an intervention step has to be carried out.

107. (Original) The A method according to claim 105, wherein the further



step is provided of regulating the angular position of the table and or of the table supporting frame with the table or of the seat.

108. (Original) The method for carrying out magnetic resonance imaging according to claim 105, wherein the table or the table supporting frame together with the table are rotatable around a axis which is substantially parallel to or coincident with their longitudinal axis relative to the supporting frame and to the magnetic structure; wherein the method comprises the further steps of: rotating the table or the table supporting frame with the table around the axis being substantially parallel or coincident with its longitudinal axis in a position in which the table is parallel to the magnetic poles or at an angle to the magnetic poles; locking the table in the position; after having rotated and locked at least the poles and the supporting frame together with the table in a position in which the table is not horizontal; and after having provided a seat plate secured at an angle to the table or to the table supporting frame with the patient sitting down on the seat plate before having carrying out the imaging procedure and the steps of: rotating back and locking the table and/or the table supporting frame with the table around the axis being substantially parallel or coincident with its longitudinal axis in a position in which the table is substantially perpendicular to the magnetic; and rotating and locking at least the poles and the supporting frame together with the table in a position in which the table is substantially horizontal; after having carried out the imaging procedure and after having taken away the seat plate before carrying out the intervention steps;

109. (Original) A method for carrying out an intervention in combination with magnetic resonance imaging providing an apparatus with at least a magnetic structure having two opposite poles spaced apart one from the other and oriented substantially parallel to a vertical plane and defining a patient imaging space; and a table for a patient mounted on a supporting frame in a slidable way in a substantially longitudinal direction of the table relative to the magnetic structure and between the two poles of the magnetic structure, the table being oriented substantially perpendicular to the poles; at least the poles of the magnetic structure and the table or the table supporting frame and the table being rotatable together around an axis

which is transverse to the longitudinal axis of the table and substantially parallel to the table; one or more patient retaining means being provided which can be secured to the table or to the table supporting frame or to the poles or to the magnetic structure or to the machine frame in different positions relative to the table or with different orientations relating to the table; wherein the method comprises: a) rotating at least the poles and the table or the table supporting frame together with the table in a position in which the table is substantially horizontal; b) providing a seat plate secured at an angle, particularly substantially perpendicular, to the table; c) providing one or more patient retaining means in a certain positions and with certain orientation relative to the table for a certain posture of the patient; d) carrying out the imaging procedure; e) rotating and locking at least the poles and the table or the table supporting frame together with the table in a position in which the table is not horizontal; f) carrying out the imaging procedure; g) eventually repeating steps a) to f) several times; h) taking away or deactivating the one or more patient retaining means or the patient seat; i) comparing the images acquired in the one or more steps d) and f) and highlighting the differences between the images. j) rotating at least the poles and the table or the table supporting frame together with the table in a position in which the table is substantially horizontal; k) taking away the seat plate; l) taking away or deactivating the patient retaining means; m) carrying out an intervention step and or completing the intervention; n) repeating one or more of the preceding steps a) to o) for each further intervention step or after having completed intervention or o) letting the patient step out of the magnetic structure.

110. (Original) The method according to claim 109, in which the images are compared by a software tool.

111. (Original) The method according to claim 109, wherein the table or the table supporting frame together with the table are rotatable around a axis which is substantially parallel to or coincident with their longitudinal axis relative to the supporting frame and to the magnetic structure; the method comprises the following further steps of: rotating the table or the table supporting frame with the table around the axis being substantially parallel or coincident with its longitudinal axis in a

position in which the table is parallel to the magnetic poles or at an angle to the magnetic poles; locking the table in the position after having carried out step a) or step b) or step c) or after having carried out step e): unlocking the table relative to the rotation around the axis being substantially parallel or coincident with its longitudinal axis and rotating back the table and/or the table supporting frame with the table in a position in which the table is substantially perpendicular to the magnetic poles after having carried out step a) or step b) or step c) or after having carried out step e).

112. (Original) The method according to claim 109, wherein a table plate and eventually a table supporting frame are provided which are formed at least by two parts which are hinged together along a transversal axis of the plate at least one or both of the two parts of the table and eventually of the table supporting frame being swingable in an angled position relative one to the other or relative to a main orientation of the table, the method further comprising the steps of angularly displacing one or both the two parts of the table plate or of the table supporting frame and locking the parts in the angular position before carrying out imaging according to steps g) or f) and of unlocking the two parts and swing back one or both the two parts in the main orientation of the table after having carried out the imaging according to steps g) or f) and before carrying out step m).

113. (Original) The method according to claim 112, in which one or more positioning or orientation step is carried out of the patient for letting the patient take different postures in which an imaging procedure is carried out and input means for the patient for correlating the posture and the imaged acquired in the posture with the presence of pain.

114. (Original) The method according to claim 113, wherein the following steps are carried out: positioning the patient on a table in a position in which the table is at a first angular position and slide partly outside the magnetic structure; sliding the table in a position in which the anatomical region to be imaged is centered with the imaging volume provided between the poles of the magnetic structure;

rotating at least the poles or the entire magnetic structure or the table or the table supporting frame with the table around an axis transverse to the table, particularly perpendicular to the longitudinal axis of the table in successive steps in different angular positions locking the table at each of the angular position and carry out an imaging procedure at each of the angular positions; rotating back at least the poles or the entire magnetic structure or the table or the table supporting frame with the table in the first angular position and sliding the table in the position at which the table is partially outside the magnetic structure.

115. (Original) The method according to claim 114, in which after at least one rotation step or after each of the rotation steps of at least the poles or the entire magnetic structure or the table or the table supporting frame with the table around an axis transverse to the table, particularly perpendicular to the longitudinal axis of the table, in one or each of the sequence of rotation steps in different angular positions, the table is further rotated around an axis substantially parallel to or substantially coinciding with the longitudinal axis from a first angular position, stepwise in several angular positions and locking and carrying out an imaging procedure at each angular position.

116. (Original) The method according to claim 113, in which after at least one rotation step or after each of the rotation steps of at least the poles or the entire magnetic structure or the table or the table supporting frame with the table around an axis transverse to the table, particularly perpendicular to the longitudinal axis of the table, in one or each of the sequence of rotation steps in different angular positions, or after one or each of the rotation steps of the table around an axis substantially parallel to or substantially coinciding with the longitudinal axis from a first angular position, of the sequence of angular positions at least one part of the table plate or both part of the table plate are stepwise rotated from a first angular position in which the two parts of the table are aligned one with the other to a sequence of several angular positions in which the two parts of the table are at an angle one with respect to the other or with the plate defined by the two parts of the table plate in an aligned position, at each of the angular positions of the at least one or of both the parts of the

table plate the plate are locked in position and an imaging procedure is carried out.

117. (Original) A method according to claim 113, wherein at least one patient supporting or retention means is provided the patient supporting or retaining means being adjustable relating to its position and to its orientation relative to the table or to at least one part of the table, the patient supporting or retention means being placed in succession in each one of successive positions corresponding each to one of several patient postures; after at least one rotation step or after each of the rotation steps of at least the poles or the entire magnetic structure or the table or the table supporting frame with the table around an axis transverse to the table, particularly perpendicular to the longitudinal axis of the table, in one or each of the sequence of rotation steps in different angular positions, or after one or each of the rotation steps of the table around an axis substantially parallel to or substantially coinciding with the longitudinal axis form a first angular position, of the sequence of angular positions or after having executed one step of angular displacement or after each step of angular displacement at least of one part of the table plate or of both part of the table plate at each one of a sequence of angular positions of the at least one or of both the parts of the table plate; while at each positioning step of the patient supporting or retention means the means are locked in position and an imaging procedure is carried out.

118. (Original) The method according to claim 113, wherein the sequence of images acquired is saved in a memory being uniquely correlated to an unique time mark of a succession of time marks corresponding to the succession of imaging procedures and the sequence of images is displayed in the correct time sequence.

119. (Canceled)

120. (Canceled)

121. (Canceled)

122. (Canceled)

123. (Canceled)

- 124. (Canceled)
- 125. (Canceled)
- 126. (Canceled)
- 127. (Canceled)
- 128. (Canceled)
- 129. (Canceled)
- 130. (Canceled)
- 131. (Canceled)
- 132. (Canceled)
- 133. (Canceled)
- 134. (Canceled)
- 135. (Canceled)
- 136. (Canceled)
- 137. (Canceled)
- 138. (Canceled)

139. (Previously Presented) A magnetic resonance imaging apparatus having a machine frame supporting a magnetic structure having at least two poles defining an imaging volume and in which imaging volume a table for supporting a patient is provided, wherein one or more patient supporting or retaining means are provided which are fastened in at least one of several positions to the machine frame or the magnetic structure, wherein the entire magnetic structure is supported rotatably together with the supporting or retaining means around the same axis, wherein the axis of rotation of the supporting or retaining means and of at least the poles of the magnetic structure substantially coincides with a central axis of the poles.

140. (Original) The magnetic resonance imaging apparatus according to claim 139, wherein one or more patient supporting or retaining means are fastened releasable to the machine frame or to the magnetic structure.

141. (Original) The magnetic resonance imaging apparatus according to

claim 139, wherein the patient supporting or retaining means are slidable along at least one, preferably two or three different directions.

142. (Original) The magnetic resonance imaging apparatus according to claim 139, wherein the patient supporting or retaining means are swingable around an axis.

143. (Original) The magnetic resonance imaging apparatus according to claim 139, wherein the machine frame or the magnetic structure have several fastening points for patient supporting or retaining means distributed over their surface and the patient supporting or retaining means comprises releasable fastening means to the fastening points.

144. (Previously Presented) The magnetic resonance imaging apparatus according to claim 139, wherein the patient supporting or retaining means are integral with the machine frame or with the magnetic structure.

145. (Previously Presented) The method according to claim 109, further comprising the step of positioning a patient in each one of a sequence of at least two or several postures or in each one of a sequence of at least two or several orientation in space while an anatomic region to be examined of the patient is in the imaging volume of an MRI apparatus and carrying out at each posture of the patient and at each orientation in space of the patient an imaging procedure of the anatomic region to be examined of the patient is carried out.

146. (Original) The method according to claim 145, wherein the at least one of the at least two postures or of the at least two orientation of the patient in space is a posture and an orientation at which a surgical or therapeutic intervention is carried out.

147. (Original) The method according to claim 145, wherein the patient is positioned in the at least two or several posture or in the at least two or several

orientation in space several times each time carrying out an imaging procedure at each posture and at each orientation in space and each time carrying out a surgical or therapeutic step at the posture or postures and at the orientation or orientations in space dedicated to the surgical or therapeutic intervention.

148. (Original) A method according to one claim 145, in which the at least two or several postures are chosen from the postures of a supine or prone stretched out lying patient a supine or prone bend over lying patient, a supine or prone patient with angled legs and or arms, a sitting patient with different levels of the seat or the two or more orientations of the patient are a substantially horizontal or a substantially vertical one or more intermediate orientations between the substantially horizontal and substantially vertical orientation or a vertical orientation transversally to the height of the patient combined with a substantially horizontal or a substantially vertical one or more intermediate orientations between the substantially horizontal and substantially vertical orientation.

149. (Original) The method according to claim 145, wherein the patient is positioned prone or supine or bend over or stretched out or in a sitting posture when it has an horizontal orientation and imaging is carried out of a certain anatomic region with the patient in the postures and orientation and the patient is successively positioned prone or supine or bend over or stretched out or in a sitting posture when it has a substantially vertical orientation or an orientation between the substantially horizontal and the substantially vertical orientation and imaging carried out also in this posture and orientation, the previous positioning steps being repeated at least twice or several time and at each repetition an imaging procedure is carried out.

150. (Original) The method according to claim 145, wherein the patient is positioned prone or supine or bend over or stretched out or in a sitting posture when it has an horizontal orientation and imaging is carried out of a certain anatomic region with the patient in the postures and orientation or the patient is successively positioned prone or supine or bend over or stretched out or in a sitting posture when it has a substantially vertical orientation or an orientation between the substantially



horizontal and the substantially vertical orientation and imaging is carried out also in this posture and orientation and the patient is positioned in an horizontal or substantially horizontal position and in a stretched out lying posture and intervention is carried out, the previous positioning steps being repeated at least twice or several time and at each repetition the corresponding imaging procedure and the corresponding surgical or therapeutic procedure is carried out.

151. (Original) The method according to claim 145, in which the different images acquired with the different postures and or orientation of the patient are compared one with another.